

WHAT IS CLAIMED IS:

1. A belt assembly comprising:
a flexible belt having a longitudinal axis;
a plurality of substantially T-shaped plates, each of the substantially T-shaped plates including a substantially horizontal portion and a substantially vertical portion, the substantially vertical portion of each substantially T-shaped plate being fastened to the flexible belt, the belt assembly configured to support and transport a load suspended from the flexible belt in a conveyor system.
2. The assembly of claim 1, the belt including a plurality of substantially vertical channels substantially transverse to the longitudinal axis and wherein the substantially vertical portion of each substantially T-shaped plate is configured to be seated in one of the substantially vertical channels.
3. The assembly of claim 2, wherein each substantially vertical channel of the belt has a substantially T-shaped plate seated therein and fastened to the belt.
4. The assembly of claim 3, wherein the substantially horizontal sections are configured to suspend the belt assembly and provide a running surface that cooperates with a roller permitting movement of the belt assembly through the conveyor system.
5. The assembly of claim 1, wherein the flexible belt is a polymeric belt.
6. The assembly of claim 5, wherein the belt includes a plurality of wires running longitudinally through the belt.

7. The assembly of claim 1, wherein at least a portion of the substantially vertical sections provide a drive surface for driving the belt assembly through the conveyor system.

8. The assembly of claim 4, wherein the substantially T-shaped plates are made from a material different than the belt.

9. The assembly of claim 8, wherein the substantially T-shaped plates are made from a rigid material.

10. The assembly of claim 9, wherein the substantially horizontal portion of each T-shaped plate includes a reinforcement rib.

11. The assembly of claim 1, wherein the belt has at least one opening extending through the belt configured to receive a fastener.

12. The assembly of claim 11, wherein the substantially vertical sections include at least one hole therethrough configured to receive a fastener.

13. The assembly of claim 12, wherein each of the substantially T-shaped plates are fastened to the belt by a fastener extending through the substantially T-shaped plate and the belt.

14. The assembly of claim 1, wherein the belt assembly includes a pair of flexible belts fastened together by the substantially T-shaped plates.

15. The assembly of claim 15, wherein each of the pair of belts is substantially the same, the belts are arranged in a

substantially parallel arrangement, and the vertical channels in each belt are aligned.

16. The belt assembly of claim 15, wherein a portion of the horizontal portion of the substantially T-shaped plate provides a driving surface for a drive element.

17. The belt assembly of claim 16, wherein the driving surface is located centrally along the vertical axis.

18. The belt assembly of claim 17, wherein the driving surface includes an interlocking structure.

19. The belt assembly of claim 17, wherein the interlocking structure of adjacent substantially T-shaped plates provide a continuous driving surface for a drive element.

20. The assembly of claim 1, wherein the belt includes at least one sensor opening.

21. The belt assembly of claim 1, wherein the assembly includes a vertical axis and horizontal axis, and the assembly is constructed in a manner such that there is minimal deflection of the substantially vertical portion from the vertical axis when the belt is utilized in a conveyor system.

22. The belt of assembly of claim 21, wherein the maximum deviation of the substantially vertical portion from the vertical axis is less than about 5 degrees.

23. The belt assembly of claim 1, wherein the horizontal portion of the substantially T-shaped plate includes a reinforcement rib extending between the ends of the horizontal portion.

24. The belt assembly of claim 1, wherein the horizontal portions adjacent substantially T-shaped plates interlock.

25. The belt assembly of claim 1, wherein the belt includes a central raised portion, and the central raised portion of the belt and a portion of the vertical portions of the substantially T-shaped plates provide a driving surface for a drive element.

26. A belt assembly, comprising:
a flexible main body having a generally flat profile and a vertical axis;
a plurality of substantially T-shaped members attached to the main body to provide a belt assembly having a substantially vertical portion and a substantially horizontal portion, wherein the substantially horizontal portion is configured to support the belt assembly when the belt is suspended in a conveyor assembly.

27. The belt assembly of claim 26, wherein the main body includes a belt.

28. The belt assembly of claim 27, wherein the main body includes a pair of belts in a substantially parallel relationship secured together by the T-shaped members.

29. The belt assembly of claim 28, wherein adjacent T-shaped members interlock with each other.

30. The belt assembly of claim 29, wherein the horizontal portions of the substantially T-shaped members interlock with each other.

31. The belt assembly of claim 29, wherein the vertical portions of the substantially T-shaped members interlock with each other.

32. The belt assembly of claim 30, wherein the vertical portions of the substantially T-shaped members interlock with each other.

33. The belt assembly of claim 27, wherein the belt includes a sensor opening to provide a positional reference point on the belt.

34. The belt assembly of claim 26, wherein a portion of the T-shaped members provide a driving surface for engagement with at least a pair of drive members.

35. The belt assembly of claim 34, wherein the maximum deviation of the substantially vertical portion from the vertical axis is less than about 1 degree.

36. The belt assembly of claim 31, wherein the T-shaped members are made from a rigid material.

37. The belt assembly of claim 34, wherein each of the T-shaped members includes a rib member on the substantially horizontal portion each T-shaped member.

38. The belt assembly of claim 32, wherein the belt assembly is configured to support a vertical load supported from the assembly.

39. The belt assembly of claim 27, wherein the vertical portion of the T-shaped members includes an interior, belt-contacting surface having at least one depression and the

belt includes at least one protrusion configured to engage the depression.

40. The belt assembly of claim 39, wherein the belt-contacting surface of the T-shaped member has a plurality of depressions configured to engage a plurality of protrusions on the belt.

41. The belt assembly of claim 28, wherein the vertical portion of each T-shaped members includes an interior, belt-contacting surface having at least one depression and each belt includes at least one protrusion configured to engage the depression.

42. The belt assembly of claim 41, wherein the belt-contacting surface of each T-shaped member has a plurality of depressions configured to engage a plurality of protrusions on each belt.

43. The belt assembly of claim 42, wherein the T-shaped members interlock with each other.

44. The belt assembly of claim 43, wherein the horizontal portion and the vertical portion of each T-shaped member include interlocking structure that interlocks with adjacent T-shaped members.